Health Care Change Management
Associates

Summary

Tracadie-Sheila is a community faced with a shortage of physicians. The emergency room is seen as the entry point into the health care system in the community due to the shortage of family physicians; therefore, the community perceives itself threatened with loss of access to an essential service. The issue of access to medical services in rural and remote areas is one of the most complex and difficult problems in health care policy, and it should not be approached with the expectation that it will ever be "solved" completely, to the satisfaction of all parties. The root of the problem is the fact that many people, physicians included, prefer urban living, and policies cannot change human nature.

Policies can compound or ameliorate the problems, and several characteristics of the current system do not help the situation. For that reason, to make headway will require coordinated policy action on multiple fronts. Increased inter-provincial/territorial co-operation will also be essential.

Precisely because the problem has until now been so resistant to the efforts of many dedicated individuals and organizations, there is reluctance to recommend dropping any of the current strategies that may be having at least limited success for some communities. There is equally reluctance to suggest a revisiting of "billing numbers" strategies. In many ways, although it is unfortunately coercive, a nationally-applied "billing numbers" and credentialling strategy has the potential to be the most effective solution, and the least costly. There is also a case for it as an appropriate management mechanism to direct publicly financed physician resources to areas of public need. The legal viability of this option, even including carefully designed variants of the original B.C. policy, which required physicians to locate in a specific area of the province, is far from certain however. Provincial/territorial governments would be unwise to count on it in a seller's market as the resource is likely to move to the region of the country that balances restriction with remuneration.

As for future directions, there appear to be three relatively less traveled roads to try. First, and perhaps foremost, are changes to the funding/purchasing models for medical services that will link funding to population health rather than to providers and their institutions. This option has the potential to alter dramatically the landscape of medical politics, would be consistent with most provinces' recent regionalization initiatives, and might complement provinces' avowed intentions to "reform primary care", although it may be politically challenging to implement. It is important to realize that regionalization has the propensity to encourage inter-region rivalry especially when competition for scarce resources is a consideration. Moreover, standarization and quality assurance issues can become marginalized by economic concerns in a totally devolved system. Secondly, more extensive use could be made of non-physician personnel such as nurse practitioners, working in close consultation with regionally-based physicians. This option would require significant additional investments in training capacity and significant changes to existing regulations if it were to be fully exploited. It would also require more extensive inter-professional collaboration than we have witnessed to date, both in the 'field', and within academic training institutions across the country. And it too promises to be trying politically. But it has long been known that health care professionals other than physicians can deliver essential elements of primary care safely, cost-effectively and in a manner satisfactory to patients.

Finally, an all-out effort could be mounted to use education-related strategies affecting physicians throughout their career life cycle to improve recruitment and retention either with or without provincial/territorial governments. Assigning managerial responsibility for rural/remote access to health remains a challenge. Assignment of responsibility will require a major change to the accountabilities within the current health care system from what is currently the case. Centralizing responsibility and resources with the single entity most likely to be capable of dealing with both personal and professional dimensions of the emergency service delivery problem is a beginning. The impact of this new paradigm is unknown but there is precedent in Nova Scotia's experience with pre-hospital care. The need for standardized training, quality assurance, manpower planning and outcome measurements will be facilitated through a central agency.

All of these options require serious political will, sustained over a long period. Whether this will exist, and can be sustained across electoral cycles and over a varied political landscape (since a pan-Canadian approach is essential) are empirical questions. Time will tell. The problem is a serious one, however, and appears to have risen close to the top of the health policy crisis pile. And while the existing array of strategies is better than doing nothing, it has not prevented the sharpening of rural/remote access as a policy issue. Something different and additional will have to be done in future if rural/remote access is to be improved.

Rural physicians in the surveyed communities, in particular, in the communities of Tracadie-Sheila, Caraquet and Dalhousie, are unable to safely deliver emergency services, inpatient care, ambulatory care and provide for an office practice with the current complement of physicians. The Department of Health and Wellness, in partnership with all other stakeholders (health care providers, the public, political leaders, medical and administrative leaders), needs to re-examine whether they can safely continue to offer 24/7 emergency service in all of the communities currently designated to have the service. Notwithstanding the problem of emergency coverage, it is evident that the remainder of primary health care is in crisis. Physicians are consciously staying away from rural Canadian communities. In addition to its "ruralness", the francophone communities surveyed have unique cultural and linguistic characteristics that affect the ability of the region to compete in the global marketplace for health care resources. In the seller's market that New Brunswick is currently bidding for resources, the economic reality is that the province will not be able to deliver the same level of service as other regions of the country. This is a function of regional economic disparity that dates back to Confederation. The current micro-environment, where regions within the province are competing with each other for resources, especially in emergency rooms, has been destabilizing and counter-productive for the Acadian Peninsula. An immediate short term solution, to stabilize the current socio-political environment, is to address disparity at least within the province by increasing compensation for rural-based services in a dramatic way. The objective is to buy time from stakeholders to bring about the necessary structural changes mentioned above.

This report recommends short term and long term approaches to address the issues. To implement these recommendations will require thinking outside the box; a practice that usually provokes anxiety for all concern; however, the status quo is more unpalatable than the option of taking action.

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Background

On June 2, 2001 a baby from the Tracadie-Sheila area of the Acadian Peninsula died. A media storm ensued, partially because the nearest emergency room to the baby's residence, located at L'Hôpital de Tracadie, was closed due to the hospital's inability to find a physician to cover the twenty-four hour shift and partially due to the realization that the emergency room, and others like it, would likely have to close in the future for the same reason. Although the June 2, 2001 closure of the emergency room was not the first time this hospital closed its emergency room because of physician availability, or the first time an emergency room has been closed in New Brunswick for this reason, the attention given this event was unprecedented, provoking heated debate within the medical profession, health corporations, government and the public at large. The Coroner will review the circumstances of the baby's death. This present review will focus on the circumstances that contributed to the lack of physician availability. Specifically, the Department of Health and Wellness of New Brunswick asked this reviewer to determine the following:

1. **Identify physician staffing issues for emergency room services at L'Hôpital de Tracadie, the factors contributing to these and their impact, if any, on quality of care.**

2. **Assess whether the issues and factors identified under #1 apply to emergency room services at other hospital facilities in New Brunswick.**

3. **Assess / prioritize the significance of each of these factors relative to one another on physician staffing issues for emergency room services.**

Methodology

The reviewer received a brief overview of the problem from Jean Castonguay, Assistant Deputy Minister of Health and Wellness for New Brunswick on June 8, 2001 and a more comprehensive discussion of the objectives on June 12. On June 12, 2001, the reviewer commenced on-site interviews and data analysis, including correspondence, media clippings, and best practices in other provinces. Stakeholders and the emergency room of following sites were visited:

Region 7	Miramichi Regional Hospital	Miramichi
Region 6	L'Hôpital de Tracadie	Tracadie
	L'Hôpital de Lamèque	Lamèque
	L'Hôpital de L'Enfant-Jésus	Caraquet
	Bathurst Regional Hospital	Bathurst
Region 5	Campbellton Regional Hospital	Campbellton
	L'Hôpital Saint Joseph	Dalhousie
Region 4	L'Hôtel Dieu St. Joseph de Saint-Quentin	Saint-Quentin
Region 1 (SE)	Sackville Memorial Hospital	Sackville
Region 3	Northern Carleton Hospital	Bath

The sites were chosen by the Department of Health and Wellness. At each site, physicians with responsibility for emergency room coverage were asked to meet with the reviewer. The terms of reference for the review (objectives) were circulated in advance. At each site, the reviewer examined the following:

- Number of physicians available to cover the emergency room.
- Number of physicians available in the community.
- Length of each emergency room shift.
- Number of patients seen by Canadian Triage and Acuity Scale category.
- Age stratification of emergency room physicians
- Payment method
- Locum usage
- Number of inpatient beds
- Call coverage of in-patients
- Office based practice profiles
- Orphan patient numbers

The reviewer recognizes that the sample population does not meet rigorous statistical sampling methodology. Because of the compressed time frame, the information is, in part, anecdotal. To draw a statistically significant inference from this sample to apply to provincial emergency rooms might not be valid. The intention of the review was to obtain an environmental scan, the primary focus of which was to determine whether the circumstances that led to the closure of L'Hôpital de Tracadie was specific to that particular hospital.

In addition to physicians, the reviewer interviewed emergency room nursing personnel in a number of the listed rooms, the Chief Executive Officer of Region 5 and Region 7, the Vice President of Medical Services for Region 6, Region 5 and Region 7. Correspondence from the Medical Director of Region 4 was reviewed.

Opinions were sought from the New Brunswick Medical Society Section of Emergency Medicine, the College of Physicians and Surgeons of Nova Scotia, the President of the Society of Rural Physicians of Canada, past Section Chair of the Rural Physicians of Ontario Medical Association. Directors of Emergency Rooms at Hants Community Hospital, Windsor, NS; Valley Regional Hospital, Kentville, NS; Queen Elizabeth Hospital, Charlottetown, PEI; Director of the Family Medicine Program, Memorial University of Newfoundland, the Director of Health Informatics, Dalhousie University, Halifax, NS and the past Chair of the Section of Family Practice, Medical Society of Nova Scotia.

Various publications were referenced: Barer Stoddart Reports (1991 and 1999), Premier's Health Quality Council interim report, The McKendry Report, Scott Reports (Nova Scotia and Ontario); material supplied by the New Brunswick Department of Health and Wellness; The Canadian Journal of Emergency Medical Care and The American Journal of Emergency Medicine.

The Current Canadian Environment

The opening lines of the Premier's Health Quality Council[1] interim report says "Our health care system in New Brunswick, as in many parts of the country, continues to face challenges in delivering the health services people need in an efficient and effective manner. Costs continue to rise and, despite significant increases in health care spending during the past two years, New Brunswickers still must face a system that is not meeting all New Brunswickers needs." The report goes on to speak of "accountability", "responsibility", and "fundamental change". It is interesting to note that this theme recurs in all of the publications reviewed and indeed was the "raison d'être" for the initial Barer Stoddart Report. A global shortage of medical personnel exists thus creating a "seller's market" for the essential elements of the health care system: physicians, nurses, technologists and administrators.

In their haste to address spiraling health care costs in the shadow of an ever burgeoning public debt, governments invoked measures such as gatekeeper controls and limits to access that have failed to address the structural problems that lead to increasing costs: public expectations, technological changes and physician directed entry. The public expects to be able to go to any hospital providing emergency services and receive prompt, free and timely access to a physician for undifferentiated problems. In a system hobbled by finite resources, it is not surprising that it is caving in under unlimited demand.

Given the growth in the Canadian population, the increase in physician workload, the changing attitude of physicians, the increasing number of women practicing medicine, the number of closed practices and the growing number of communities looking for physicians, the current supply of physicians and particularly physician services (i.e., effective supply) is not sufficient to fully meet the health care needs of Canadians as they are currently defined by government.

With the aging of the current physician workforce, the decrease in the number of new graduates (which began in the year 2000), the continued level of out-migration of physicians - and with no increase in new physicians - the current relative under-supply will become more severe in the future. By the year 2009,[2] the number of physicians reaching retirement age will exceed the number of new graduates - if nothing is either done to influence the factors that determine the overall size of the active physician pool or to change the current paradigm which requires every patient seen in an emergency room to be seen by a physician, the system will not be able to meet the expectations of its public.

The tight physician supply is exacerbating the provinces' efforts to deal with the maldistribution of physician services. Despite a number of (theoretically) effective, ministry-sponsored incentives and training initiatives - particularly the recent recruitment incentives developed by health ministries, group practice models/alternative funding plans, rural medicine continues to have an increasingly serious problem with physician distribution.

The problem is not only growing; it is becoming more pervasive.[3] As recently as five or six years ago, under-servicing was only an issue in rural and remote communities in the north. Now many small- and medium-sized communities in southern Ontario are also having significant problems finding enough physicians. As of October 1999, 99 Ontario communities had been designated as

under-serviced and were looking for a total of 534 physicians. This illustrates the context or marketplace in which New Brunswickers are competing for resources.

Ontario's efforts to ensure an adequate supply and distribution of physician services are further complicated by issues of skill mix. Based on workload data, waiting times and reported shortages, Ontario is currently facing a significant shortage in certain specialties, including general surgery, obstetrics/gynecology, pathology (laboratory medicine), anesthesiology, orthopedic surgery, psychiatry and family medicine.[4,5]

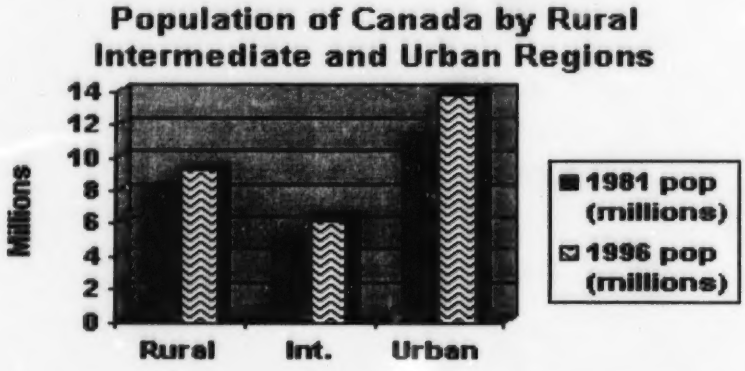
What lies in the future in Ontario, is the reality today for the Maritime Provinces. The reasons for the shortages vary, depending on the specialty. Factors that may keep new physicians from entering certain specialties include lack of exposure to the specialty in undergraduate education, lack of opportunities for re-entry training, the rigidity of the postgraduate training system, the growing desire among physicians to work in more "sociable" hours and lack of remuneration for certain services. Factors that affect the type and amount of services provided by physicians include practice patterns, remuneration, migration as well as the availability of other health care providers and facilities, such as nurses and operating rooms.

Making accurate long-term projections of physician supply is extremely challenging because most of the factors that affect supply (e.g., individual physician behaviours, policies of regulatory bodies) are often unpredictable or uncontrollable. Planning efforts are complicated by the difficulty of predicting future societal health care needs, changes in health care delivery or technological advances. They are also hindered by the variations in physician databases, which make it difficult to determine an accurate number of physicians for workforce planning.

The Effect of Rurality in Canada

The national framework of *rurality* was developed on the basis of feedback from rural Canadian physicians to the January 1999 "Canadian Medical Association Survey on Rural Medical Practice in Canada."[2] The framework is not intended to determine if a community is "rural" or not but, rather, to determine, from a medical perspective, its relative degree of *ruralness* to an established norm or relative to another community. Rural Canada is growing in population at a half percent annually, and this will accelerate as baby boomers retire to the country where many of them have their roots.

Figure I



99.8% of Canada's 10 million square kilometers are rural by area. 31.4% of Canada's population or roughly 9 million people live in predominantly rural regions. Towns under 10,000 account for 22.2% of the population, and yet they are served by only 10.1% of physicians. Canada's larger rural and regional centers (10,000 to 100,000) population constitute 15.9% of the population and have only 11.9% of the physician pool. With sub specialists and high technology of large cities distant, country doctors work in small groups in settings that require a broad spectrum of clinical skills. Perhaps more so than in any other setting, rural doctors represent the ideals of true Generalist Physicians, true General Surgeons and true specialists in General Internal Medicine. [2,6]

Using the Physician Resource Evaluation Template (PRET) developed by the CMA, the base stock for the survey was determined as being 5,531 active licensed rural physicians (21.7% female) on Jan 1, 1998. The status quo scenario projects the practicing rural physician population to be 44.1% female in 2021. In this scenario the rural physician to population ratios change from the current 1 doctor to 1235 patients to 1:1887 in 2021. The most important determinant of this attrition is the current age distribution of rural doctors. Simply put, retirement rates will climb dramatically as soon as 2010 and will continue to climb as our median age becomes 55 by 2021.

Keeping the model at status quo levels for all variables allows the user to view future supply if no major changes occur within the system. The status quo scenario projects a decrease of rural physicians from 5,531 in 1998 to 4,529 in 2021 (an 18% decrease). The ratio of physicians per 1000 population will decrease even more, assuming the rural population of Canada continues to hold at 22.2% of the total. The ratio is projected to decrease from 0.81 physicians per 1,000 population in 1998 to 0.53 by 2021 (a 35% decrease).[2]

Not only will there be fewer physician in 2021, they will be older. In 1998, 21.7% of rural physicians are over age 55. By 2021, this figure is projected to be 46.6%. Females are projected to make up 44.1% of the practicing rural physician population by 2021, compared to 24.6% in 1998.

Retirement rates are kept at status quo levels for all age groups for all years up to 2021, when the attrition due to retirement is increased to 75% for physicians aged 70 and over. Status quo retirement rates continue to be used by all physicians under age 69. The supply decreases to 4,392 by 2021. This is a decrease of 21% from the 1998 supply. The ratio of physicians per 1000 population will decrease, assuming the rural population of Canada continues to hold at 22.2% of the total.

However, applying today's retirement rates on a demographically shifting group of active physicians results in increased attrition. The number of physicians retiring each year jumps dramatically around the year 2010 due to an aging physician population and this number increases throughout the remaining projection years. Holding variables at their status quo levels means that the only projected yearly net gain of physicians occurs from 1999 to 2000. For all other years in the status quo scenario, the overall supply is projected to have an annual decrease. The overall supply is reduced from 56,775 in 1999 to 52,438 in 2021. Relative to the population, this means there will be 1.36 physicians per 1000 people compared with 1.82 in 1999 (25% decrease).

Allowing for current rural recruitment rates and with increased medical school enrollment by 10% starting in 1999 will yield a decreased attrition rate but a worsening doctor to patient ratio of 1:1,818 in 2021

In New Brunswick, the North of the province is demonstrably more rural than the South. To understand the impact of that reality on the problems associated with providing services to a population designated to be rural, it is important to understand the association between *ruralness* and physician/ health worker supply economics.

The twenty-one factors that most define a community as rural/remote were ranked into the top 10; the CMA investigators broke the factors down into four primary and six secondary factors. For the most part, these primary and secondary factors coincide with anecdotal assertions made by a variety of groups. After isolating these ten factors, a relative weighting was calculated for each based on the number of mentions it received relative to the other nine factors included in the framework. A means of applying the national framework of *rurality* is proposed in the CMA report.

The four highest ranked factors can be broadly grouped or categorized as: inadequate physician supply (both GP/FP's and specialists), distance to referral centres (secondary and tertiary), level of on-call as a function of the intensity of the workload and responsibilities, and the absence of equipment.

Family physicians tended to rank on-call responsibilities among the top three factors more frequently than specialists (44% Vs 33%) but both groups rated it very highly in terms of importance (86% and 88% reported it was very or extremely important) in the previous question. The likelihood of selecting on-call responsibilities among the top three factors diminished with age: almost half (48%) of those physicians who were under 35 chose it in their top three compared with only 19% of those 65 and over. Despite this variation, and with the exception of those 65 and over, more than 80% of every age group rated it as very or extremely important.

As with the importance ratings, respondents exhibited regional differences when selecting their top three factors. However, when looking at the six most frequently cited factors rated by each region, it became clear that there was much similarity among the regions and only a few outliers. For instance, all regions included the following factors among the six most frequently selected (out of a list of 21 factors):

- *on-call responsibilities,*
- *transport time to secondary referral center*
- *lack of specialist services*
- *insufficient GP/FP's.*
- *the absence of equipment such as x-ray and laboratory services (except Quebec)*

The Atlantic region frequently chose no ambulance service as being important while the British Columbia region (including the Territories) included lack of locums. Three regions (Quebec, Ontario and the Prairies) included time to tertiary care centers but Quebec was the only region to include a sparsely populated catchment area among its six most frequently selected factors.

More than two thirds of the respondents rated the absence of equipment such as x-ray and laboratory services (69%) and difficulty in obtaining locums (66%) as being important as well. There did not appear to be significant differences in how physicians answered the question based on gender, certification status (GP/FP or specialist) or age, although more detailed analyses should be carried out to verify this from a statistical perspective. In summary the factors defining rurality are:

Primary Factors:

- high level of on-call responsibilities
- transfer time to secondary referral centre
- lack of specialist services
- insufficient GP/FP's

Secondary Factors:

- transfer time to tertiary referral centre
- absence of equipment such as x-rays and laboratory services
- difficulty in obtaining locums
- no ambulance service
- inability to provide services such as obstetrics and general surgery
- sparsely populated catchment population.

It is important to look at the pressures on demographics and its impact on physician supply in Canada.

Total number

The number of rural physicians moving abroad each year from 1994 to 1997 are illustrated in Table I:

Table I

Year	1994	1995	1996	1997
# Abroad	85	79	67	66

Gender

The gender distributions of rural physicians moving abroad each year from 1994 to 1997 is illustrated in Table II:

Table II

Year	1994	1995	1996	1997
% Male	80%	84%	84%	77%
% Female	20%	16%	16%	23%

Age

Unlike the gender distribution, the age of physicians moving abroad is not consistent; greater proportions of younger physicians emigrate. The age distribution of emigrating rural physicians in the PRET is based on the average of the 1994 to 1997, broad specialty-specific age distribution of all physicians who emigrated from rural Canada; this was held constant for each projection year.

Gender

Data on the demographics of physicians who have completed training each year are published by CAPER (Canadian Post-MD Education Registry (CAPER) data and postal codes on the CMA Masterfile) and can be analyzed over time. Table III shows the gender distributions, by broad specialty, of the national practice entry cohort for the past six years.

Table III

Year	1993	1994	1995	1996	1997	1998
Family Medicine % Female	46%	50%	51%	50%	53%	53%
Medical Specialists % Female	35%	39%	39%	42%	44%	43%
Surgical Specialists % Female	26%	23%	23%	33%	26%	28%

The 1998 gender distributions by broad specialty, for the portion of the practice entry cohort that set up practice in rural Canada was 50% female for family medicine, 40% female for medical specialists and 38% female for surgical specialists.

To calculate physician-to-population ratios for the future years, the template uses population projections extracted from the Statistics Canada publication, *Population Projections for Canada, Provinces and Territories 1993-2016*, published in December 1994. As the publication shows projections only for Canada as a whole, rural population must be estimated. In 1996, rural population in Canada made up 22.2% of the total population. As such, the PRET uses the projections for Canada and calculates 22.2% of the projected total population to obtain an estimation of rural population.

All of the scenarios created using the PRET are considered reasonable since they are not unprecedented based on previous trends in physician flow. All scenarios of physician supply in rural and remote areas of Canada project a decrease in physician: population ratio for every year to the year 2021.

The percentage of the population living in rural and remote areas (22.2%) was held constant in all the scenarios for rural Canada as well as throughout the entire time span of the projections (1998-2021); this percentage could in fact change over time, in which case the physician: population ratios would also vary.

All scenarios modify a single assumption compared to the status quo for rural Canada. This is the minimum change that would be effected; in a real life situation, more than one variable is likely to change in any given year. The model is not designed to project the most likely future; rather, it is designed to analyze the change of individual variables.

New Brunswick has an overwhelmingly rural demographic in the Northern part of the province. Combining this observation with the Primary and Secondary factors that affect the ability to retain and recruit physicians, does the environment observed in the nine institutions reviewed share some of the characteristics and how is this related to the closure of the emergency room?

Observations

Northern New Brunswick with its large Francophone community is a unique geographic, cultural and linguistic sector of New Brunswick and Canada. Any template that is used to address medical manpower issues in this sector will do a disservice to both service providers and consumers if it does not factor in the cultural and linguistic reality. The reviewer was impressed by the cultural homogeneity of the sector and the degree to which the professionals work comfortably in Canada's second official language. It was clear to the reviewer that the personnel in the two predominantly English speaking institutions reviewed, Sackville Memorial Hospital and Northern Carleton Memorial Hospital, do not recognize the significance of the cultural issue on retention and recruitment of health care personnel. Whether other regions share this opinion is unknown.

L'Hôpital de Tracadie

Located in the town of Tracadie, this institution reportedly provides primary and secondary care to approximately 15,000. The Tracadie-Sheila area is a broad-based community of overlapping jurisdiction with Region 7. Residents as far afield as Neguac, Allardville and Lamèque tend to use the Tracadie facility for primary and secondary services. Region 6 has a maximum allowable bed population of 343 beds, including Alcohol and Detoxification beds servicing a total population of 82,446 residents or 11 percent of the New Brunswick population. L'Hôpital de Tracadie has 59 beds.

There are currently 9 physicians officially resident in Tracadie-Sheila. Using Department of Health and Wellness (DHW) calculations, this translated into 9.5 Full Time Equivalent (FTE) physicians. Unfortunately, the DHW uses gross billings to Medicare (a practice used in other Canadian jurisdictions but rapidly losing favour) as the method of calculating FTE's rather than other more reliable predictors of physician productivity. For example, a physician based solely in office practice may see a skewed population of "young well people" easily billing to the Medicare FTE quotient, whereas another physician seeing elderly ill patients, with a substantial in-patient practice may never reach the target billing volume of one FTE- but each physician could work the same number of hours. This is especially true of young and inexperienced physicians.

In Tracadie-Sheila, of the 9.5 FTE physicians, only 6.5 FTE physicians are available to cover the Emergency Room, the in-patient population and to attend outpatient clinic patients. Using the College of Family Practice of Canada (CFPC) recommended physician-patient ratio, the population served by Region 6 (Approx 50,000 people) requires 60 and 70 family physicians.

There are currently 61.69 FTE physicians listed on the DHW's roll, not all of whom are physicians capable to provide comprehensive family practice care. The reviewer is concerned that there are a number of areas with significantly overlapping patient populations. People tend to "shop" for the quickest access to care, rather than remain on the rolls of one physician or institution. It is difficult to determine the "right" ratio of physician to patient unless patients were rostered. Aside from the time spent "covering" the emergency room, physicians are free to spend as much or as little time in their offices, in the hospital with in-patients or in ambulatory clinics. Some physicians can see six people an hour while others require more time with patients. This is especially true of younger, recently trained physicians.

A 1999 study funded by Health Canada projected that our overall supply of doctors will reduce from 56,775 in 1999 to 52,438 in 2021. Relative to the population, this means the ratio will fall from 1.82 physicians per 1000 people in 1999 to 1.39 in 2021 (a 24% decrease).

Table IV

Statistics Canada Demographic Data (1998)

Province	Pop'n	Rural Pop'n	% Rural	Total GP's	Rural Pop'n of GP's	%Rural	Urban Pop of GP's	Rural Pop'n per GP
All	28,846,761	6,396,906	22.2%	28,983	4,775	16.5%	927	1,340
Newfoundland	551,792	306,924	55.6%	579	254	43.9%	753	1,208
PEI	134,557	61,332	45.6%	93	31	33.3%	1,181	1,978
Nova Scotia	909,282	351,668	38.7%	956	299	31.3%	849	1,176
New Brunswick	**738,133**	**357,984**	**48.5%**	**692**	**243**	**35.1%**	**847**	**1,473**
Quebec	7,138,795	1,595,735	22.4%	7,579	1,328	17.5%	887	1,202
Ontario	10,753,573	1,596,138	14.8%	10,215	1,022	10.0%	996	1,562
Manitoba	1,113,898	371,338	33.3%	1,064	306	28.8%	980	1,214
Saskatchewan	990,237	428,565	43.3%	872	230	26.4%	875	1,863
Alberta	2,696,826	694,474	25.8%	2,453	476	19.4%	1,013	1,459
British Columbia	3,724,500	576,663	15.5%	4,396	567	2.9%	1822	1,017
Yukon	30,766	8,958	29.1%	43	8	18.6%	623	1,120
NWT	64,404	47,127	73.2%	41	11	26.8%	576	4,284

Table V
Rural GP/FP numbers by region and year

Rural GP/FP's numbers by region and year					
Province	**1994**	**1995**	**1996**	**1997**	**1998**
Newfoundland	328	304	297	288	221
Nova Scotia	293	272	258	251	254
PEI	39	37	32	35	33
New Brunswick *	**200**	**170**	**174**	**156**	**122**
Quebec	1294	1264	1233	1226	1202
Ontario	1168	1129	1042	1030	1060
Manitoba	227	223	218	212	213
Saskatchewan	271	273	249	224	227
Alberta	442	398	357	329	292
British Columbia	576	527	484	496	490
Yukon	7	7	17	7	8
NWT	23	19	6	19	13
Totals (Rural)	**4868**	**4623**	**4367**	**4273**	**4135**
Totals (Urban)	**25854**	**25165**	**24859**	**24583**	**24848**

Table V speaks to sampling problems in physician manpower planning. Based on postal code addresses, the cut off for the definition of rural for Statistics Canada was a population of 10,000 based on county boundaries. The methodology changed from 1994 to 1997, resulting in erroneous numbers. Simply increasing the catchment population does not, in practical terms, define the criteria for a community to be rural.

Statistical models predict a decrease of rural physicians from 5,531 in early 1990's to 4,529 in 2021. The ratio of physicians per 1,000 population will decrease from an already low 0.79 physicians per 1,000 population in 1999 to 0.53 by 2021 (a 33% decrease). Tracadie-Sheila with 9.5 FTE's for 15,000 patients is at 1:1,578, which is significantly greater than what is recorded in Table V. Complicating matters in the Tracadie-Sheila area is the recent retirement of two long established physicians without replacement. Anecdotally, some 10,000 patients are orphaned. These patients present to the Emergency Room for primary care carrying their personal medical files. This situation is unacceptable and presents significant medical legal challenges for care providers in that continuity of care is not guaranteed. It is unlikely that there are 10,000 orphan patients given that the total catchment population is reported to be 15,000.

Region 6 Bylaws require physicians with hospital privileges to cover the emergency room of L'Hôpital de Tracadie. 6.5 of the 9.5 FTE physicians currently provide coverage. 3 FTE's do not for reasons of health or age. The age/gender demographic is interesting to note. Two male physicians are aged 56 and 66 respectively and do not provide coverage to the emergency room. They account for 2.67 of the 9.5 FTE physicians. Of the remaining 6.5 FTE's, six are female, one of whom is currently working less than half-time (not recorded in the official DHW figures) and one of these women is married to the only other remaining male physician. The average age of the 6.5 FTE physicians providing coverage is 34 years. One physician aged 29 years skews this average.

Physician workload is a predictor of burnout. The emergency room processed 41,869 patients (1999 DHW figures). L'Hôpital de Tracadie's figures differ substantially from DHW figures: Total visits for the year 2000-2001 is listed at 42,028: 31,107 triaged as emergency visits and 10,921 as outpatients (specialty clinics and booked patients). L'Hôpital de Tracadie was unable to provide 1999-2000 data for comparison (Table VI). Given that the year-over-year total varies by less than one percent, the reviewer is prepared to accept the variance. The reviewer noted other institutions separated emergency patients from booked outpatients however DHW figures appear to report the total of both groups as emergency visits.

Table VI

L'Hôpital de Tracadie 2000-2001 ER Visits

CTAS	Number	Percent
I	19	.06
II	263	.80
III	3883	12.5
IV	11343	36.5
V	15599	50.1
	31107	100

Work done by the Canadian and American Association of Emergency Room Physicians using the Canadian Triage and Acuity Score (Level I, patient requires immediate attention, Level V, patient can safely wait two hours), data and the Australian Triage Scale validates workload measurements for physicians practicing in the emergency room. The formula uses data compiled from the Canadian Triage and Acuity Score. Only two institutions surveyed were unable to provide CTAS data to the reviewer: Sackville Memorial Hospital and Northern Carleton Hospital. Using the average physician time per triage category in relative terms, a workload can be calculated for each patient using the CTAS method of categorizing patients. The data from L'Hôpital de Tracadie is compared with other hospitals where CTAS data was available. For example L'Hôpital de L'Enfant-Jésus in Caraquet has a lower level of acuity whereas the Bathurst Regional Hospital data show similar acuity patterns to that seen in regional hospitals in the South.

Table VII
Bathurst Regional Hospital 2000-2001 ER Visits

CTAS	Number	Percent
I	112	.24
II	1217	2.61
III	8779	18.90
IV	20573	44.28
V	15779	34.05
	46460	100

Table VIII

Miramichi Regional Hospital 2000-2001 ER Visits

CTAS	Number	Percent
I	38	.09
II	306	.73
III	7625	18.31
IV	14375	34.52
V	19290	46.34
	41634	100

Most emergency rooms with over 30,000 visits see 10-20 percent of their volume between 2400-0800. These patients tend to be sicker requiring more intensive interaction by physicians and nursing personnel. At L'Hôpital de Tracadie, 8 % of their visits are between 2400 and 0800. In Ontario, the average patient per hour is based on CTAS data. In Ontario, a hospital serving 20-35,000 emergency patients, the average number of patients per hour is 4.3. Given the age mix and the number of orphan patients in the Tracadie Sheila area compared to the Ontario reference population, it is reasonable to believe that 4.3 patients per hour is probably too many and that the number should be closer to 3.7.

L'Hôpital de Tracadie emergency room processes an average of 85 patients a day and based on workload (85/3.7) requiring 19 to 22 hours of physician time. It is therefore reasonable to infer that this workload requires a physician be in the hospital full-time. Given this patient load, it is unreasonable and unsafe to expect physicians to cover the emergency room from the office.

The DHW has established an average work week for salaried physicians. Notably, the reviewer was advised that the three physicians on salary in Lamèque and the one physician on salary in St. Quentin are paid for 37.5 hours per week with paid education and vacation leave. This was supported by official DHW information. Accepting that 37.5 to 40 hours per week is the benchmark to be used, workload data indicates that physicians must work more than 37.5 hours per week to address all of the demands of practice in the Tracadie-Sheila area as illustrated in Figure 2:

Figure 2

6.5 FTE physicians x 37.5 hours	**= 245 hours per week**
Emergency Coverage 24 hours x 7 days	= 168 hours per week
39 inpatients @ 15 minutes /day	= 68 hours per week*
Ambulatory Clinics	= 18 hours per week
TOTAL	**254 hours per week**
Time available for office patients, Extra-mural house calls, office management, committee work etc	**-9 hours per week**

* Physicians report spending more time on in-patient coverage given that many patients are unknown (orphan) to them.

The above illustrates that the physicians in Tracadie-Sheila are unable to attend to the demands of office work given their responsibility to provide emergency service to the institution as mandated by the Bylaws 6 (3) of the Nor'East Health Network.

Physicians practicing at L'Hôpital de Tracadie are remunerated by Medicare using the Fee for Service System in both the emergency room and for office-based work, except from 2400 to 0800 when they receive $400 plus FFS. Figure 3 outlines the payment options.

Figure 3

FACILITIES	OPTION 3A	OPTION 3B	OPTION 3C	EFFECTIVE DATE
Sackville		X		August 1/97
St Stephen			X	August 1/97
Sussex			X	August 1/97
Woodstock	X			July 14/97
Oromocto	X			July 14/97
Perth		X		July 14/97
Grand Falls	X			August 1/97
Dalhousie	X			July 14/97
Caraquet	X			July 14/97
Tracadie	X			July 14/97
Ste Anne De Kent	X			July 14/97
Bath	X			July 14/97
Minto		X		July 14/97
Plaster Rock		X		July 14/97
St Quentin		X		August 1/97

For all options, the shift from midnight to 8am is paid at $400.00. This amount is payable to one physician per facility per night.

Option 3A : All services from 8 am to midnight are billed FFS only. Midnight to 8 is $400.00 plus FFS.

Option 3B: A fee of $80.00/hour is paid for services rendered from 6 pm to midnight during regular work days. All services from 8am to 6pm are billed FFS. A fee of $80.00/hour is payable for shifts from 8 am to midnight on statutory holidays and weekends. Midnight to 8 is $400.00 plus FFS. Physician must be on site.

Option 3C: A fee of $80.00/hour for the shift from 6pm to midnight seven days a week. The shift from 8am to 6pm will be billed on a FFS. Midnight to 8 is $400.00 plus FFS. Physician must be on site.

Notes

1. Region 3 was given an extra 3 hours/day from Aug 1/00 to Sep 30th /00 to try to ease the waiting time in ER.
2. ER in Region 2 (Saint John Regional Hospital) were given an extra 2 hours/day effective Apr 12/00 until such time as they fill their GP vacancies.
3. Minto was given a special consideration for their ER as no GP would do ER at that hospital - they are paid at $80.00/hour.

A regular office visit pays approximately $22 per patient whereas the average emergency room weekday visit pays $13 per visit. For every patient seen in the emergency room, the physician loses $9 while office expenses continue. For physicians doing only emergency work, it can be argued that the emergency visit does not attract expenses except for shadow billing costs. However in communities like Tracadie-Sheila, physicians have office expenses that continue and until recently, Region 5 required every physician requesting emergency room privileges to have an office. This has proved to be a significant deterrent for physicians whose primary interest was

emergency medicine. Table IX outlines the fiscal reality in three surveyed facilities. This is the attraction to walk-in clinics: a physician working in a walk-in clinic can make twice as much money per hour than a physician working in a rural emergency room, and seeing less demanding patients.

Table IX (Tracadie-Sheila) 1999-2000

Physician	Gross Medicare Bllings	ER-On Call	ER Fee code	Gross ER Revenue	Office Revenue	Office overhead (40%)	Office revenue-overhead
1	$198,045	$2,400	$9,951	$12,351	$185,694	$74,278	$111,416
2	$211,939	0	0	0	$211,939	$84,776	$127,163
3	**$157,182**	**$10,400**	**$52,465**	**$62,865**	**$94,317**	**$37,727**	**$ 56,590**
4	**$169,238**	**$1,400**	**$51,481**	**$52,881**	**$116,357**	**$46,543**	**$ 69,814**
5	**$182,765**	**$10,400**	**$44,469**	**$54,869**	**$127,896**	**$51,158**	**$ 76,738**
6	**$212,842**	**$42,000**	**$74,382**	**$116,382**	**$96,460**	**$38,584**	**$ 57,876**
7	**$158,789**	**$16,000**	**$47,843**	**$63,843**	**$94,946**	**$38,584**	**$ 56,362**
8	**$183,524**	**$10,800**	**$61,518**	**$72,318**	**$111,206**	**$37,978**	**$ 73,228**
9	**$184,457**	**$12,800**	**$57,527**	**$70,327**	**$114,130**	**$44,482**	**$ 69,648**
10	$ 14,283	$2,000	$12,283	$14,283	0	0	0
11	Locum	$400	$2,264	$2,664	0	0	0
12	$15,830	$2,800	$7,124	$9,924	0	0	0
13	Locum	$800	0	$800	0	0	0
14	Locum	$800	0	$800	0	0	0
15	**$136,260**	**$10,400**	**$42,173**	**$52,573**	**$83,687**	**$33,474**	**$ 50,213**
16	Locum	$800	$2,186	$2,986	0	0	0
17	Locum	$400	0	$400	0	0	0
18	Locum	$2,400	0	$2,400	0	0	0
19	Locum	$2,800	$3,587	$6,387	0	0	0
20	Locum	$800	0	$800	0	0	0
21	Locum	$800	$3,260	$4,060	0	0	0
22	$127,910	0	$865	$865	$127,045	$50,818	$ 76,227
23	$183,397	0	$3,053	$3,053	$180,344	$72,138	$ 108,206
24	Locum	0	$1,458	$1,458	0	0	0
25	Locum	0	$912	$912	0	0	0
26	Locum	0	$2,979	$2,979	0	0	0
Total	**$2,136,461**	**$131,400**	**$481,780**	**$613,180**	**$1,554,021**	**$610,540**	**$933,481**

For the fiscal year 1999-2000, all physicians who practiced in the Tracadie-Sheila area billed Medicare $2,136,461. Emergency Room Medicare billings plus the stipend to cover the emergency room amounted to $613,180.

Several physician groups (Caraquet, Bath, Sackville and Dalhousie) advised the reviewer that office expenses were a significant deterrent to emergency room coverage. Several physicians volunteered to open their books to prove that the majority of their income is from emergency work and not from office practice. Table X illustrates the breakdown of revenue and expenses for the 6.5 FTE physicians cover the emergency room at L'Hôpital de Tracadie. Table XI indicates a similar pattern in Caraquet.

Table X

Fiscal Position physicians doing ER Coverage Tracadie-Sheila (1999-2000)

Physician	Gross Medicare Bllings	ER-On Call	ER Fee code	Gross ER Revenue	Office Revenue	Office overhead (40%)	Office revenue-overhead
3	$157,182	$10,400	$52,465	$62,865	$94,317	$37,727	$56,590
4	$169,238	$ 1,400	$51,481	$52,881	$116,357	$46,543	$69,814
5	$182,765	$10,400	$44,469	$54,869	$127,896	$51,158	$76,738
6	$212,842	$42,000	$74,382	$116,382	$96,460	$38,584	$57,876
7	$158,789	$16,000	$47,843	$63,843	$94,946	$38,584	$56,362
8	$183,524	$10,800	$61,518	$72,318	$111,206	$37,978	$73,228
9	$184,457	$12,800	$57,527	$70,327	$114,130	$44,482	$69,648
15	$136,260	$10,400	$42,173	$52,573	$83,687	$33,474	$ 50,213
Total	**$1,385,057**	**$114,200**	**$389,685**	**$546,058**	**$838,999**	**$328,530**	**$510,469**

Table XI (Caraquet)

Physician	Gross Medicare Bllings	ER-On Call	ER Fee code	Gross ER Revenue	Office Revenue	Office overhead (40%)	Office revenue-overhead
1	$108,104		$765	$765	$107,339	$42,936	$64,403
2	$210,195		$67,527		$107,339		
3	$119,128		$1,471	$1,471	$117,657	$47,063	$70,594
4	$178,356	$13,200	$48,570	$61,770	$116,586	$46,634	$69,952
5	$234,221	$17,200	$73,443	$90,643	$143,578	$57,431	$86,147
6	$188,906	$32,400	$114,300	$146,700	$ 42,206	$16,882	$25,324
7	$234,544	$15,200	$91,293	$106,493	$128,051	$16,882	$111,169
8	$165,895	$14,400	$62,122	$76,522	$ 89,373	$51,220	$38,153
9	$146,769	$13,600	$61,525	$75,125	$ 71,644	$35,749	$35,895
10	Locum	$1,200	$12,283	$13,483	0	0	0
11	$307,048	$12,400	$53,719	$66,119	$240,929	$ 96,372	$144,557
12	$15,830	$6,000	$21,212	$27,212	$ 15,830	$ 6,332	$ 9,498
13	$210,594	$14,800	$62,783	$77,583	$133,011	$ 53,209	$ 79,807
14	Locum	$1,200	$5,520	$ 6,720	0	0	0
15	Locum	$800	$8,487	$ 9,287	0	0	0
16	Locum	$800	$1,005	$ 1,805	0	0	0
17	Locum	$400		$ 400	0	0	0
18	Locum	$800	$1,656	$ 2,456	0	0	0
19	Locum	$800	$270	$1,070	0	0	0
20	Locum	0	$2,042	$2,042	0	0	0
TOTAL	**$2,119,590**	**$145,200**	**$687,951**	**$833,151**	**$1,348,872**	**$527,772**	**$821,110**

Given the difference in revenue of an office visit versus an emergency room visit, physicians believe they would be financially better off staying in their offices, even after expenses are factored into the scenario.

Residents of Region 6 utilized the emergency department for 158,149 visits in 1999-2000 or 1.9 visits per person compared with Region 2 where utilization was .9 visits per person. 23% of all emergency encounters in New Brunswick were in Region 6. This data raises four questions: 1) Is the utilization appropriate? 2) Could patients be seen more cost-efficiently in an office setting? 3) Is the data accurate given that the capture of emergency room patients and ambulatory visits statistics are sometimes different depending on the institutions? 4) Does this type of practice profile raise quality of care issues? What is known is that a substantial number of patients appear to be receiving primary care from the emergency room. Given that physicians are not available in the office, this observation is not surprising. Greater than 50 percent of all admissions to hospital are from the emergency room, an increasingly common phenomenon in all emergency rooms. What is interesting to note however, is the cost of providing physician emergency services in Region 6 is less than 50 percent of the cost of providing those services in Region 2 (**$3,300,358**. versus **$5,399,999**),Tables X, XI, XII and XIII) but Region 6 is processing only 5 percent less patients (Table XI). It is true that the acuity of the patients is less but it begs the question as to whom is being paid fair market price and how is that related to value for the taxpayer?

Table XII (1999-2000 AHSC Emergency Services Costs)[7]

SERVICE	Medicare	Salary	3rd party	Practice Plan	Sessional Rates	Education	Stipend	Board Funded
Emergency Room Coverage (SJRH-SJH)	$2,857,294		$440,024	$3,760,997				
Rural On-Call	$1,189,002				$1,639,002			

Table XIII (1999-2000)

AHSC EMERGENCY VISITS*	
SJRH	48,657
SJH	51,157
CCH	27,951
SHC	25,299
GMH	2,792
FHC	8,988
Total	164,844

* 2000-2001 figures not available

Table XIV
Emergency Room Coverage Costs
All physicians covering ER (incl'd locums)

Facility	Costs
Bathurst	$1,233,396
Tracadie-Sheila	625,780
Caraquet	833,151
Lamèque	3,244
Total	**$2,695,571**

The physicians associated with the emergency room at L'Hôpital de Tracadie, have organized their emergency coverage shifts in 8 hour slots. In smaller centres, like Northern Carleton Hospital, and Sackville Memorial Hospital, low volumes allow physicians to do twenty-four hour rotations. In centres like Northern Carleton Hospital where call is one in three, physicians are required to do three consecutive twenty-four hours shifts to get a weekend off. At L'Hôpital de L'Enfant-Jésus in Caraquet, physicians work 12-hour shifts. The physicians at L'Hôpital de Tracadie moved to 8-hour shifts as a means of preserving family life. This mandated more shifts in the emergency room and in essence compounded their problem..

At the time of the review, the June 2001 emergency room schedule of L'Hôpital de Tracadie had 25 eight hour shifts covered by locums, physicians doing extra shifts (than originally scheduled) or left uncovered. The July schedule was not available for review. The Vice President of Medical Affairs for Region 6 made it clear that it is the responsibility of the physicians to find individuals to cover the emergency call rota. In Region 4, the Vice-President for Medical Services and the facility manager share responsibility for the schedule at the L'Hôtel Dieu St. Joseph de Saint Quentin. On occasion he has had to cover the department himself when no other person was available. Scheduling for the emergency room has become an onerous task for physicians and was cited as a significant stressor.

The reviewer was impressed by the dedication of the physicians at L'Hôpital de Tracadie. They demonstrated a commitment to their community and verbalized tremendous frustration with their inability to provide what they believe to be a good standard of care. The unusual skewed female demographic presents special challenges given the extra responsibility females have for child rearing. Several expressed concern about their family life or the lack thereof. The physicians were open to a concept that would see one emergency room open between the communities of Caraquet and Tracadie from 2200 to 0800 on a week about rotation. They were pessimistic that they could attract new physicians to the area given the working condition and they despaired at having to leave the area. The majority of physicians are local residents that have returned home to family and have deep roots.

The current situation is not sustainable for the over-worked physician group, the inappropriately serviced population and the health administration. Significant risk management issues were identified:

- Follow-up care (continuity of care) is practically non-existent for orphan patients.
- The adoption of best practice guidelines and evidence-based protocols is not part of the culture of the hospital due to lack of time and leadership.
- Physicians are harassed by an un-informed public.
- Public expectations are high and difficult to manage.

How do the other institutions surveyed compare?

L'Hôpital de Lamèque

This 12 bed facility was restructured in 1994-1995 such that it does not offer emergency services after 1800 hours. 19,941 patients were seen in the emergency room (DHW 1999-2000 figures). The institution provided figures to the reviewer for 2000-2001 that indicate 13,190 triaged patients were seen in the emergency department. (Table XV) 8906 patients were seen in the ambulatory clinics of the hospital. Rather than a 35 percent drop in visits, the reviewer believes the 1999-2000 DHW figure includes clinic visits. Patients are expected to drive to either Tracadie or Caraquet for after-hours emergency services, each community is located some 50 kilometers away from Lamèque. There are currently seven physicians servicing the population considered to be within the catchment area of the Lamèque facility but four choose not to be associated with the hospital. The four range in age from 54 to 82 years. Only two of these physicians appear on the DHW physician data roster and account for 2.42 FTE physicians. It was reported to the reviewer that the other two physicians see approximately 30 patients each per day. Medicare billings indicate that they see many more. None of the four cooperates in any way with the three salaried physicians associated with the hospital. For example, when the physicians are on holiday, patients arrive at the emergency room for care for such things as prescription refills or insurance form completion.

The three physicians currently salaried are contracted to work 37.5 hours per week (including emergency shifts) with 5 weeks of vacation, five days of sick time and five days of continuing medical education for $120,000 a year. The physicians expect this figure will increase proportional to the raise expected for FFS physicians. A fourth physician is expected shortly shifting the demographic profile to three females and one male for the physicians associated with the hospital.

Table XV
L'Hôpital de Lamèque 2000-2001 ER Visits

CTAS	Number	Percent
I	5	.04
II	55	.48
III	554	4.84
IV	2991	26.14
V	7536	65.86
	11441*	100

* 2049 patients were not triaged

92 percent of the patient seen at the Lamèque facility are considered low risk and non-emergent.

The reviewer found the group of physicians associated with the hospital to be very satisfied with all aspects of their professional and personal lives. They are evolving a shared-care model with nursing that will see transitioning of care using standardized protocols.

When the reviewer spoke with staff nurses, he was advised that the community remains displeased with the closure of their facility after 1800 hours. Nurses are concerned about patients arriving at their doorstep after hours with life threatening illnesses that they feel inadequate to treat. They feel that they should be able to at least intervene with low risk interventional care such as intravenous therapy and certain medications.

L'Hôpital de L'Enfant-Jésus (Caraquet)

This 49 bed facility offers both primary and secondary services, including low risk obstetrics. It is located midway between Bathurst and Tracadie and services a population of 15,000 if the geographic area serviced by the Lamèque facility is considered after 1800 hours.

The DHW reports that in 1999-2000, 49,138 patients (Table XVI) were seen in the emergency room of the L'Hôpital de L'Enfant-Jésus. The data supplied to the reviewer suggests that the figure for 2000-2001 is 38,674. The acuity stratification is remarkably close to that seen in Tracadie except for a significant variance in CTAS Level IV and V. This suggests that one institution is coding the same type of patient differently; a phenomenon common when training is not standardized.

Table XVI

L'Hôpital de L'Enfant-Jésus

CTAS	Number	Percent
I	34	.09
II	182	.48
III	2613	7.0
IV	9139	24.3
V	25596	68.13
	37564*	100

* 1110 un-coded (total patient population 38674)

The DHW data indicates that there are six physicians associated with L'Hôpital de L'Enfant Jésus accounting for 6.23 FTE physicians. Nine physicians attended the meeting with the reviewer and two new physicians are expected in the fall. Eight physicians share call in the emergency room. Physicians report they are having significant difficulty with the call-schedule and express sympathy for the physician s associated with L'Hôpital de Tracadie but were unwilling to entertain a modified coverage protocol as suggested by the physicians in Tracadie.

The reviewer was impressed with the degree of tenacity with which this group defended their hospital and emergency room. Five of the physicians expressed a willingness to withdraw from emergency room coverage citing the following reasons:

- Loss of income compared with office practice
- Encroachment on personal lives
- Health concerns
- Three of the physicians are over 55 years of age.
- Quality of care issues due to heavy workloads.

The Chief of the Emergency Room expressed significant concerns about ongoing coverage of the emergency room. He is supplementing the schedule considerably- to the extent that he was unable to attend the birth of his child. Risk management issues and frustration with protocol development were flagged issues of immediate concern. He finds the process tedious, administratively complex and extremely frustrating. Other physician groups in Miramichi and Bathurst shared this sentiment. The arrival of two new physicians to Caraquet is expected to alleviate some of the strain on emergency staffing. They are expected to do full-time emergency for a few months to allow for vacations and stress relief. The director of the L'Hôpital de L'Enfant Jésus emergency room is justifiably concerned given that the average age of his physicians is 45 years.

The physicians have, as a collective, expressed concern about remuneration. Each felt that emergency work cost them money and unless the disparity is addressed, unrest will be the rule rather than the exception. They expressed frustration at the lack of understanding for rural practice: the different workload, patient expectation, lack of backup, outdated equipment, difficulty transferring patients, lack of a comprehensive pre-hospital program, recruitment and

retention problems made worse by PRAC and insecurity regarding the future of their hospital. Several expressed doubts they would stay in the area without a hospital. Some expressed a desire to have one hospital centrally located between Tracadie and Caraquet.

The department is currently financed through FFS as the volumes currently justify this funding approach. However this encourages physicians to see more patients in the emergency room. They rationalize this observation by referencing ongoing office expenses while they serve in the emergency room. Sessional fees would therefore be punitive. The physicians feel that a minimum tariff of $135-$150 per hour will be required to attract locums and stabilize manpower in the department.

Bathurst Regional Hospital

The reviewer met with the Emergency Room Physician representative Dr. Wilson. Bathurst is a regional hospital with approximately 200 acute care beds offering a full range of services except for Cardiovascular and Neurosurgery. The emergency room is staffed with six FTE Emergency Room physicians who do not have any responsibility for office practice, none of whom is certified. The department processed 46,460 patients through the emergency room in 2000-2001. (Table XVII) They are paid $92 per hour. They have had to rely on locums from Saint John Regional to cover the occasional shift. Like Miramichi, Bathurst after hours clinics are becoming increasing popular where physician resources are available. More lucrative than emergency medicine, less demanding given that the problems are usually minor, when physicians have a choice, they will opt to work in an after-hours clinic. Although this serves to decrease emergency throughput, costs to the system rise for dubious benefit unless decreased waiting times and improved access is more important than quality of care. Follow-up care remains a problem; however, the main reason physicians feel that seeing patients in emergency for primary care is inappropriate.

It was reported to the reviewer, by other physicians in the region, that Bathurst Regional Hospital will pay up to $150 per hour to secure locums from Saint John Regional. This could not be substantiated. Dr. Wilson is one of several physicians who have provided locum support to both the Caraquet and Tracadie physicians at a rate $100 per hour plus $200 transportation. The Corporation pays the Physicians. The reviewer wondered why there was extra capacity to aid physicians on the Acadian Peninsula when extra resources were required to cover emergency shifts in the Bathurst Regional Hospital.

The Director of the Moncton Hospital Emergency Room, Dr. Chris Levesque, did confirm that the Tariffs at his hospital, supplemented by the Regional Corporation are as follows: **$100 per hour, 0800 to 1800; $130 per hour, 1800 to 2400; and $150 per hour 2400 to 0800 and weekends.** The expected shortfall (Medicare- Expenses) is in the neighbourhood of $500,000 annually. A similar fee structure is present at the George Dumont Hospital in Moncton and the Saint John Regional Hospital in Saint John.

Bathurst Regional Hospital does not require family physicians to provide on-call coverage in the emergency room. This has provided an incentive for young physicians to locate in Bathurst and to concentrate on office work. Physicians in other parts of the region feel this practice, sanctioned by regional management, provides Bathurst with a competitive advantage over more

rural sites where emergency room service is mandated, when recruiting new physicians. Office work is more lucrative than emergency work and with the increase in tariff expected for office work, rural physicians feel the gap will widen.

Table XVII

Bathurst Regional Hospital 2000-2001 ER Visits

CTAS	Number	Percent
I	112	.24
II	1217	2.61
III	8779	18.90
IV	20573	44.28
V	15779	34.05
	46460	100

The Bathurst emergency physician group feels that the tariff must rise and the disparity between the South and North must be eliminated to level the playing field. The group feels that emergency room physicians working in the larger southern centres have better access to back-up and therefore should not be paid more than physicians working in centres where backup is less accessible. Transferring patients to southern hospitals remains a major concern, not only because it is time consuming but it is felt to impact negatively on outcomes.

Hospital Saint Joseph (Dalhousie)

This facility has 42 beds and serves 12,000 people covering the eastern end of Restigouche. The hospital is located 20 minutes from the Regional Hospital in Campbellton but the professional relationship between physician groups appears irrevocably fractured. "The Medical Director won't even visit anymore." Eight physicians provide service, translating into 7 FTE physicians. The DHW lists six physicians that do the work of 6.9 FTE physicians. Six physicians with hospital privileges attended the meeting with the reviewer. All expressed grave doubts about ongoing coverage. The summer months are particularly difficult due to vacations. It has been the practice to rely on Quebec-based locums one of whom provides call coverage in groupings of five consecutive 24 hour shifts. The Restigouche Health Services Corporation covers the costs of transportation, accommodations and car rental. Based on last year's costs, the projected cost for 12 months will range between $10,000 and $12,000 per physician. Without locum physicians uninterrupted emergency room cannot be guaranteed. The cost of providing locum coverage to hospitals served by the Restigouche Health Services Corporation will be in excess of $100,000 in fiscal year 2000-2001.

DHW reports that 19,300 patients were seen in the emergency room of L'Hôpital Saint Joseph in 1999-2000. (Table XVIII) Figures provided by the hospital for 2000-2001 indicate that 20,551 were seen.

Table XVIII

L'Hôpital Saint Joseph (Dalhousie) 2000-2001 ER Visits

CTAS	Number	Percent
I	11	.10
II	123	1.18
III	1108	10.67
IV	7779	74.95
V	1357	13.10
	10379*	100

* Triage data only available for September to March.
Total visits = 20,551

As with other community hospitals, seeing an average of 55 patients in the emergency room in one 24 hour shift precludes the operation of an office practice on the same day and at least half the of the next day. It is regarded as unsafe and counterproductive to hold an office after 24 hours of call duty thereby contributing to further loss of income. In addition, the hospital-based patients require daily visits

The reviewer was provided with sufficient information from physicians in Dalhousie to cause significant concern about physician burnout. The average age is over 50 years; one of the physicians who recently arrived to replace another has lost 20 pounds (in six months) due, in part, to stress in the workplace and expressed concern about his ability to carry-on. On June 15, 2001 the reviewer was notified that this physician tendered his resignation effective August 31, 2001. Given that he covered 30 shifts over the last six months, this presents the group with an immediate problem. To illustrate the precariousness of the position, on the day before the reviewer's visit, a physician became ill and was unable to continue her shift in the emergency room. A 71-year-old physician was asked to come in to relieve her. Without the help of this physician, who continues to do up to three shifts a month, the situation will actually be worse.

Unless there is a dramatic change in physician manpower, the current situation at L'Hôpital Saint Joseph is not sustainable much beyond the summer.

Campbellton Regional Hospital

This 124 bed acute care facility offering primary and secondary services, is located one hour from the Bathurst Regional Hospital. It services a catchment population that reaches across the border into the province of Quebec. DHW indicates that there are 18 physicians in Campbellton that provide 23 FTE positions; however, physicians indicate that there are only 12 family physicians available. Eight physicians provide emergency room coverage, two do obstetrics and two are unable to work due to age. Two locums from Saint John Regional Hospital provide 10 nights a month of coverage without which the department could not function. The shifts are twelve hours for regular staff and 24 hours for locums. Locums are costing the Corporation over $100,000 a year.

The emergency room does not have any physicians solely dedicated to emergency medicine; indeed the concept is discouraged. Physicians feel that manpower is so unstable, that if a physician relinquishes responsibility for emergency work, then it will only be a matter of time before he is called back to cover a shift due to lack of sufficient manpower. Concerned about extinguishing a skill set, the physicians believe, as a collective, that they must continue to cover the ICU, the emergency room and in-patients. Servicing some 30,000 residents of the Restigouche area and an unknown number of Quebec residents, the workload for this group is taxing.

Physicians expressed concerns about the disparity between what physicians are paid in the South and what they are paid. They are demanding a tariff of $150 as the minimum required to sustain services beyond September 2001.

Although the Campbellton Regional Hospital uses the CTAS system, the data provided is not in a format that permits the reviewer to provide an informed analysis.

L'Hôtel Dieu St. Joseph de Saint-Quentin

This small community hospital is operated by Region 4 and is the smallest of three facilities operated by the Corporation. Located one and half-hours from Campbellton and almost one hour from Edmundston, it is one of the more isolated facilities reviewed. Its catchment population is approximately 5,000 people, the hospital has 12 active care beds, most of which are occupied by palliative care patients and a small number of low risk active care patients. 14,000 patients were seen in the emergency room according to 1999-2000 DHW figures by three physicians providing 2.71 FTE positions. One of these physicians has recently accepted a salaried position with the Federal Government but has agreed to continue to assist with call.

One physician is salaried and works 37.5 hours a week, including call. The amount of his salary was undisclosed but physicians in other communities claim that he has " a special deal, more lucrative than the Lamèque physicians". This institution has been surviving on locums from Montreal and Edmundston. On occasion, even the Vice President of Medical Affairs for the Region has had to cover off shifts. The cost to the Region was not disclosed but it was clear that significant funds are being expended to support the locum program. L'Hôtel Dieu St. Joseph de Saint-Quentin will be a challenge to service with physicians as its location mitigates against easy access to a locum pool. The young physician whose tenure is only two years old expressed concern about increasing demands on his time and reluctance to increase his call coverage. This group also expressed dismay at the disparity in relative value between urban-based and rural-based practitioners.

Sackville Memorial Hospital

This 21 acute care bed institution is located 30 minutes from Moncton, the site of two tertiary care facilities serving 10,000 people from the villages of Dorchester, Memramcook, Aulac and the

town of Sackville. It is important to note the role of this facility as the only health care "provider" available to the students of Mount Allison University. In addition it is a growing "suburb" of Moncton. It was the only institution visited by the reviewer where the physicians are content with both the method and amount of payment and the workload. Twelve physicians provide 10 FTE physicians using the DHW formula. Actually there are nine FTEs available to the emergency room with two husband and wife teams, one of which shares one call position and the other team, although listed as having two billing numbers, practice as one FTE. One physician listed in the DHW data is off ill indefinitely.

The average age of the physicians is 43 with none under 34 years. The emergency shifts are organized in 10-hour days and 14-hour nights with the average workweek at 55-60 hours. The physicians attempt to take 6 weeks off a year. The Town of Sackville provides office space to all but two physicians at a subsidized rate. There is a very small number of orphan patients.

Sackville is stable for the foreseeable future but with the aging physician population and the expected growth, it will not be long before replacement is a concern. Two of the physicians expressed a desire to retire within the next five years.

Sackville Memorial Hospital has not instituted a formal triage system. All patients register centrally and the ward clerk assigns the patient to an emergency or outpatient classification. The reviewer pointed out that this is a major risk concern for both the physicians and management. A lack of resources was cited as the reason for the lack of formal triage.

Northern Carleton Hospital

Located one-half hour from the Woodstock facility and one-half hour from the Perth facility, Northern Carleton Hospital is a 24 bed acute care facility currently staffed with three physicians. DHW FTE data was not available on this group. Covering 24/7/365 has been a challenge for this group. The use of locums is essential to the survival of services. On the day of the review, a physician from Newfoundland was in the community helping out. Dr. Scott Moffatt and his wife practiced in the Bath area for seven years, leaving to join the Faculty of Family Medicine and to be closer to family in Newfoundland.

This hospital's catchment population is approximately 10,000. The ability to sustain in-patient, outpatient and office practice is predicated upon the arrival in the fall of a new physician who is relocating from British Columbia. A former partner of this group, he is being lured back to the area by the "lifestyle".

The physicians were unable to provide CTAS data at the time of the review. DHW data show that this facility processed 21,176 patients through the emergency room in 1999-2000. It is not clear how many of those could be classified as emergencies. What is clear however is that the volume is too high to have physicians run a simultaneous office. The physician group claims the office-based practice is losing money and is prepared to share financial information to support the claim.

For this group, it is critical to have an increase in the emergency room tariff or some compensation for office expenses to support the business case.

Miramichi Regional Hospital

This hospital is the only primary or secondary care facility in Region 7. Currently under trusteeship, this institution has many challenges facing it. With a total of 176 beds acute care beds, it serves a population of approximately 40,000 people. The emergency department is funded for 33 hours on weekdays and 36 hours on weekends and is serviced by three FTE physicians dedicated to emergency work and 20 family physicians who assist with call. None of the physicians is certified in emergency medicine. Although the emergency room throughput in Miramichi is similar to that in Bathurst the acuity level in Miramichi is less. (Table XIX and XX) The emergency room does enjoy more stable physician manpower than the Bathurst or Campbellton Regional Hospitals.

Table XIX

Miramichi Regional Hospital 2000-2001 ER Visits

CTAS	Number	Percent
I	38	.09
II	306	.73
III	7625	18.31
IV	14375	34.52
V	19290	46.34
	41634	100

Table XX

Bathurst Regional Hospital 2000-2001 ER Visits

CTAS	Number	Percent
I	112	.24
II	1217	2.61
III	8779	18.90
IV	20573	44.28
V	15779	34.05
	46460	100

The immediate challenge that face the Miramichi Hospital, aside from its trusteeship situation, is the availability of support resources. For example, this regional facility does not have access to Plastics or Neurology. Orthopedics is limited to one person and both Surgery and Internal Medicine are in crisis. Perhaps more critical is the lack of radiology services, particularly on weekends. The institution relies on Tele-radiology which the physicians feel is less than ideal. They raised the concern that the new MRI service, which is to be a mobile unit, will not have a radiologist available. This technology, like Ultrasound and CAT scanning, lends itself well to digital image transfer for remote reading. There needs to be some attention given to the

infrastructure and support around teleradiology to address the concerns of clinicians as well as the needs of patients.

Currently physicians receive $75 per hour for day work in the emergency room and $99.21 per hour for evenings, nights and weekends. The physician group felt strongly that the tariff must rise to a minimum of $111 per hour to sustain the current manpower levels and a premium will be required to recruit locum support. For example, three of the family physicians who do a substantial number of emergency shifts are between 55 and 60 years of age. It was not clear if the Regional Administration is supporting the physicians financially.

Currently this department functions with little in the way of structure. Protocol development and quality of care issues are "frustrated by bureaucratic red tape." The reviewer met with the Vice President of Medical Affairs and the CEO of Miramichi Regional Hospital; both acknowledge that there are significant challenges with medical staff structure and organization.

Commentary

Identify physician staffing issues for emergency room services at L'Hôpital de Tracadie, the factors contributing to these and their impact, if any, on quality of care.

By any measurement, the current complement of physicians cannot provide the level of services expected by either the regional health management or the public of the Tracadie-Sheila area. The contributing factors are:

1. The current model of care delivery requires that a physician see each patient.
2. There is an inadequate number of physicians to address the demands of patients.
3. Retention and Recruitment efforts are mitigated by structural anomalies:
    - Physician manpower planning did not factor age or gender as a determinant.
    - The FTE calculation is based on gross Medicare billings rather than workload.
    - Rurality index as a differentiating factor.
    - Lack of flexibility with remuneration and incentives initiatives.
    - Lack of a dedicated locum pool.
    - Regional disparity
4. Evolving medical education.
5. Productivity as a function of marital status, gender and shift length.
6. Regional bidding wars.
7. Isolation from tertiary services.
8. Complex patient transfer protocols.
9. Inter-facility rivalry.
10. North versus South geo-political and socioeconomic concerns.

Physicians, as a collective, believe that their ability to deliver quality health care is impacted by the above factors. Specifically, the lack of time to attend to various professional concerns have contributed to:

A. A lack of a quality assurance culture.
B. The absence of recognized evidence-based protocols.
C. Inappropriate admissions due to lack of continuity of care.
D. A demoralized professional group lacking the energy to think proactively.
E. A belief that alternative care models are less valuable than the current delivery model.

The physicians associated with L'Hôpital de Tracadie, are, for the most part, young, dedicated and keenly committed to their community. However, a paradox exists: the fact that most are from the area is a testament to the community nurturing nature; the lack of empathy for the current manpower crisis is "intolerable and contributing to the discontent". Criticism leveled at the physicians by local and provincial leaders has further eroded professional and personal confidence. The atmosphere is charged with recrimination and distrust.

Assess whether the issues and factors identified in Tracadie-Sheila apply to emergency room services at other hospital facilities in New Brunswick.

Some common themes were identified in all of the surveyed sites:

- ✓ Rural physicians and the constituents they serve feel they are not understood by southern New Brunswickers.

- ✓ The current regional bidding war is counter-productive and creating disparity for have-not areas of the province.

- ✓ There is an under-funded liability in emergency medicine that is not reflected in the current Medicare cost structure. Regional Boards have supplemented tariffs to an amount exceeding $1,200,000. It is believed the number may be higher given the pervasive need for locums throughout the province. The exact number has been difficult to capture. The Medical Society of New Brunswick and the DHW are currently negotiating a new tariff but the fear amongst rural-based physicians surveyed is that it will not reflect "true value" as defined by the current market. They predict that if the tariff does not rise to meet market demands, more urban Regional Boards will continue to bid for resources to the detriment of rural-based physicians.

- ✓ Rural physicians surveyed feel that urban based office practice is competing for Medicare dollars in an unfair way. Rural practice is an amalgam of responsibilities for in-patient/outpatient/emergency room and office patients with little flexibility to choose one over the other. Regional Administration has tied privileges to emergency call participation. In urban areas, physicians are increasingly electing to practice medicine without inpatient, obstetrics or emergency responsibility, an option that makes urban practice more attractive.

- ✓ All physician groups surveyed felt that office practice is costing them money if they have to work in the emergency room. The meter on overhead keeps on ticking whether they are "in" or not.

- ✓ All physician groups surveyed feel they do not have a stable manpower plan and are concerned that they will not be able to guarantee uninterrupted emergency coverage.

- ✓ All physician groups surveyed agreed that the minimum tariff for emergency work should rise to $111 per hour. A premium rate will be required for locums. There was consensus that physicians with extra training (FRCP) or CFPC(EM) should receive a premium above tariff.

- ✓ All physician groups surveyed believe they require a more standardized emergency medicine specific evidence based approach to common problems; for example, Deep Vein Thrombosis, Pulmonary Embolism, Ectopic Pregnancy, Pneumonia, Myocardial Infarcts etc.

- ✓ All physician groups surveyed complained of problems with the transfer of patients from community hospitals to regional and tertiary facilities. The majority of the complaints were focused on the dispatch system based in Moncton. The dispatchers' lack of knowledge of the geography, local resources and the challenges associated with treating unstable patients in a rural environment, were mentioned specifically. They believe this impacts on the quality of care delivered.

- ✓ All physician groups surveyed expressed a desire to have a standardized provincial trauma management plan to streamline both access and transfer of trauma victims.

- ✓ All physician groups surveyed expressed concern that the medical training programs are insensitive to rural needs.

- ✓ All physician groups surveyed agreed that there is a role for advanced practice nursing in the delivery of primary care.

- ✓ All physician groups surveyed valued their hospital and see hospital based medicine as an integral part of comprehensive primary care.

- ✓ All physician groups surveyed felt that remuneration for hospital based work was inadequate and discourages physicians from seeking hospital privilege.

- ✓ All physician groups surveyed felt that access to secondary and tertiary services in the community is essential to the survival of primary care.

- ✓ All physician groups surveyed felt that Telecare New Brunswick increases the number of patients seeking emergency room consultations. Physicians want the resources re-allocated to community emergency rooms and want legislation enacted to change the scope of nursing to better address local needs of which they feel they have a better understanding. The evidence for the physician claims was anecdotal. An independent province-wide consumer survey has been conducted to evaluate patient satisfaction but a cost-benefit analysis of Telecare has not.

Assess / prioritize the significance of each of these factors relative to one another on physician staffing issues for emergency room services.

Under the existing fee for service payment scheme, it is said that there is insufficient coordination to ensure that the *right* providers in the right places provide the right services. It is evident that there are problems with primary care in many urban environments. The city dweller in Canada has a choice between walk in, emergency room, the family doctor, paediatrician, and gynaecologist for elements of their primary care. Such choices can result in fragmented and therefore expensive and often uncoordinated care. Furthermore, with the exception of the ED, there is limited dependable access to care on a 24-hour, 7-day a week basis. The only constant in the current "change environment" in which health care finds itself today, is that patients can access the system through the emergency room. Indeed, over 50% of all hospital admissions are through the emergency room.[3]

Rural Primary Care is in difficulty from two juxtaposed perspectives: A) Physicians are electing to do urban-based office practice for the lifestyle, increasing earning power over emergency room work and lack of comfort with academic training for rural practice, especially emergency work without backup and B) Increasing compensation for emergency room work will create competition for scarce resources compounding the problem in the rural office practice environment. Government will be blamed for improving the conditions in the emergency room environment without addressing the fiscal issues implicit in rural office practice.

The factors that have converged to compromise the delivery of accessible health to rural New Brunswickers are as follows:

- Training
- Money
- Lifestyle
- Expectations

To try to weight one of these over the other fails to recognize the fact that each factor is contributing to the problem to a critical degree. Eliminating one might ameliorate the problem for a short time, but unless attention is given to the others, the relief will be short-lived. All of the institutions reviewed identified these critical factors.

Training

The training of health professionals is a complex issue. There are arguments to be made for and against training as the cause of the current "under-supply" of health personnel. For example, in nursing, the abolition of the two-year training program for the more academic four year baccalaureate program is often cited as the reason for the nursing shortage. Supporters of the change would say that the complexity of nursing with its technological advancements and increased responsibilities inevitably led to the change. Similarly, the training of physicians has changed dramatically not only in length of time spent in school but perhaps more importantly on the emphasis placed on diagnostic aids and the dependence on specialists and teams to treat patients.

In the early 1990s decisions taken by provincial/territorial licensing authorities in line with positions taken by the Federation of Medical Licensing Authorities and the College of Family Physicians of Canada (CFPC), led to the "one year rotating internship" being replaced by a two year residency in family medicine as the minimum license requirement. This was structured as a two-stream choice: either a specialty residency leading to Royal College certification, or a two-year family practice residency leading to CFPC certification. This has had three immediate effects. First, for those who would, under the old model, have completed a rotating internship and gone on to family practice, a second year of training is now required. But it appears that few internal (within academic health centre) adjustments were made to the mix of residency positions, although reallocations were recommended by the National Coordinating Committee on Postgraduate Medical Training. The effect has been to channel fewer residents overall into the family practice stream. Second, perhaps more important was the observation that the pool of relief physicians dried up literally over night. Some physicians would elect to practice in rural areas to pay off educational debt before entering residency. Some chose to stay but even for those who did not, their exposure to rural practice not only supplemented existing physician numbers, it sensitized the individual to the rigors of rural practice.

Third, the elimination of the rotating internship has tended to force the hand of physicians regarding career specialty decisions somewhat earlier than previously. While switching specialties during training, and re-entry into specialty training, are certainly possible and do occur, the current system is perceived to be relatively inhospitable to changing one's mind. For example, a young physician who under the old system might have contemplated general practice for a number of years before finally deciding which specialty to enter (and who might possibly have chosen a rural or remote area in which to do that family practice), now faces a much more restrictive environment; if he or she has any thoughts about a specialty practice, the choice is best made early (in the third year of the undergraduate program) - rural/remote areas are losing out on those early years of family practice. Perhaps a more fundamental question needs to be asked: Is it reasonable to ask an average 25 year old to make a fundamental career choice, with few options to alter course, after two years of post graduate training?

One could argue about matters of relative competency, or about who is to blame for the reduced opportunities to train in family practice. Rather than point fingers it is important to point out the current realities, which seem to be fewer family practice-trained Canadian graduates, with (at least in some situations) less confidence and competence of the types required for rural and remote practice. This can only add to the difficulties of rural/remote communities.

There is another school of thought. In some sectors of emergency medicine, it is believed that only certified emergency room specialists should provide emergency care. Both the Canadian and American Associations of Emergency Room Physicians recognize that current training programs cannot deliver the volume of certified individuals required to staff Canadian emergency rooms. This is especially true for rural-based rooms. There is an argument to be made however that emergency room physicians are being asked to accept responsibility for treating patients that, in the past, were the exclusive jurisdiction of surgery, orthopedics, internal medicine and anesthesia. Rapid sequence intubation, conscious sedation, major joint and fracture reductions, electro-cardioversion are examples of treatments requiring advanced training. Centres with demonstrably greater acuity scores, like Saint John Regional Hospital, require individuals with these skills. Research and teaching are important roles performed by physicians in the emergency room.

Increasing academic involvement by these physicians is required to train physicians skilled in emergency medicine so that they are comfortable in rural-settings and to generate peer-reviewed evidence based research. These non-clinical activities have value and must be performed by qualified individuals.

Family physicians will need to be involved in the provision of emergency care for the foreseeable future. Given that training programs cannot provide the personnel needed to staff all Regional and Tertiary rooms, it would seem logical that certification be gained through a mentoring program using the practice eligibility route via the Canadian College of Family Practice. The correct balance of certified persons to family physicians in the emergency room remains uncertain. It is clear that the majority of patients seen in emergency rooms currently are handled safely by well-trained family physicians. Indeed there is evidence to show that one-third of the patients could be seen safely by appropriately trained nurses in a shared-care model if the northern and outpost nursing experience is to be used as a reference.[9] There is no published evidence to suggest that CTAS level IV/V patients seen in the majority of emergency rooms in Canada by family physicians have worse outcomes than those seen by certified personnel.

Lifestyle

Recent surveys of young family physicians indicate that they do not wish to practice in remote areas citing lifestyle as the major inhibiting factor. The training programs stress the need for physicians to guard against burnout and over commitment. Rural practice with its multifaceted practice profile tends to pull young physicians in many directions that are unfamiliar to individuals substantially trained in urban environments. This fact has been recognized by other jurisdictions struggling with rural medical manpower shortages. For example, Australia requires candidates applying to "rural training stream" to be from rural areas of Australia and assures that the majority of their training will be in a rural environment with rural-based specialists and family practitioners. This observation has not been lost to Ontario educators who recently announced the creation of a Northern Medical School to be located in Northern Ontario.

In his review of small rural hospitals in Ontario, Scott[2] suggested that the maximum on-call frequency for physicians covering the rural emergency departments be one in five. Rural hospitals that provide obstetrical and surgical services will also have physicians on call for obstetrics, anesthesia, and/or surgery at frequencies greater than that for the emergency department. Specialists in larger rural referral centres might also be on call "all the time" as they often are working in solo practice.

There are at least two different approaches to calculating a maximum on-call frequency guideline: (1) minimum hours of rest and (2) maximum hours of work. Although it is true that in many situations physicians may be taking calls from home or hospital and often sleeping during a portion of the on-duty period, it is important to ensure that any guideline accommodates the situation where the physician is actively attending patients for the whole on-duty period.

Minimum hours of rest

After a 24-hour workday, physicians should take at least a full day off. Using the airline pilot's recommendation of at least two night's rest per day on, a minimum of four physicians would be required to provide uninterrupted coverage. Three are needed to create a schedule that gives two nights of rest before the next call period. The fourth physician enables all participants to take time off for holiday, educational or sick leave.[8] This applies to low volume rooms (approximately 10,000 visits a year).

Maximum hours of work

Using the maximum annual 900 hours of on duty-flight time recommended for pilots, 10 physicians would be needed to provide 24-hour a day coverage for one year. Alternatively, if one assumes that physicians should not be expected to work more than the standard 37.5 hours per week with 4 weeks vacation and 2 weeks educational leave per year, at least 5 FTE physicians would be necessary to cover the 8760 hours in one year assuming no other clinical or administrative responsibilities. There is obviously room for individual interpretation of work intensity, the degree of responsibility associated with the work, and the amount of rest necessary to remain vigilant and unimpaired by sleep deprivation. This is exemplified by the contrast between the work standards of pilots and others. The "hours of work" method is the more reasonable way of calculating a maximum on-call frequency, because it considers the total burden of work in a year. The scenario of five FTE physicians working a standard labour workweek including night duty is reasonable and should be considered a minimum standard of care. Where rural communities do not have five physicians from which to draw, it may be possible for neighbouring communities to share the on-call coverage. The maximum distance between those communities participating in "cross coverage" should be the subject of another guideline. For example, the College of Physicians and Surgeons of Manitoba recommends a time of 30 minutes or 50 km for emergency room services. The other modifier to consider is volume: 20,000 visits a year at 15 minutes per interaction, requires 5000 hours of physician time or 3 FTE physicians.

Another option, for isolated communities with fewer than five physicians is to have frequent locum tenens relief. This could be provided in the form of sufficient weekend and holiday coverage to give an annual individual average workload equivalent to the five-physician roster. Obviously, there would have to be appropriate financial incentives to attract locum tenens physicians and one questions whether there are enough "warm-bodies" for this. Nova Scotia has had tremendous problems with their locum program.

There may be other creative options, but the ultimate and least desirable solution for such understaffed communities is to have periods of time with no physician coverage. This would require some communities to lower their expectations regarding physician availability and to respect their doctors' time off duty. Although this is not an ideal solution, it could make the difference between having a physician some of the time or having no physician at all.

Money

Money is the current touchstone in rural medicine. Often a short-term solution to many problems, it will not solve the lifestyle and training issues that impede physicians from entering rural practice streams. Having said this, the value of the work performed is linked to "self-esteem". Physicians who perceive they have greater responsibility, work longer hours and have less time with family, feel society does not value their work when they are remunerated less than an individual who adds less value. This is the urban-rural paradigm argument that has given rise to a new found militancy in rural practice. Political organizations have arisen in all provinces to address both sides of the argument- government is caught in the middle. Complicating matters, is the recognition that Medical Societies represent their membership in a democratic way and when charged with the task of distributing a finite amount of money, will do so to serve the needs of the majority: urban-based family physicians and specialists.

Equity has become a cause-celebre for all stakeholders. Rural-based patients believe they deserve the same access to quality health care as urban-based patients. Geography and the lack of resources combine to frustrate equal access to health care guaranteed under the Canada Health Act.

Equity and parity parenthetically frame the "money" argument. Clearly there is disparity between the have and have-not provinces in Canada in all sectors of commerce- medicine is no exception. The Maritime provinces are caught in a bidding war and find themselves in a seller's market. At some point, the ability to pay, or lack thereof will have to be defined. Troublesome is the fact that regions within a province, charged with delivering a mandated level of services, are bidding against each other. To suggest that physicians should rise above this approach to improving their economic lot is naive. To believe that the pot is bottomless is delusional. At some point the payer (the government in the name of the people) will have to draw the line. In their haste to do that, it must be recognized that there are inequities and that current structures are unlikely to address those inequities given past experience and human nature. Tough decisions are required and dire consequences are possible.

In 2000-2001, the Tracadie-Sheila physicians who serviced the emergency room 24/7 averaged $69.99 per hour whereas physicians working at the Moncton Hospital and Saint John Regional, averaged between $102 and $130 per hour. There is precedent for governments intervening to address inequities in rural practice.[10,11] In each case, British Columbia and Alberta governments, supplemented existing remuneration schemes to address on-call issues. Nova Scotia did the same with the Rural Stabilization Fund in 1997. By way of comparison, Table XX outlines the competitive marketplace.

Table XXI
Emergency Room Compensation

Location	Method	Remuneration	FTE hours/WK
QE II (Halifax)	Alternative Payment Plan	$120/hr	26-28
Ottawa Civic	Fee for service	$120-$170/hr	22
Kingston	Alternative Payment Plan	$200,000/yr	28
St. Michael's(Toronto)	Alternative Payment Plan	$120/hr	26
Toronto Hospital	Alternative Payment Plan	$120/hr	26
Winnipeg HSC	Salary/FFS	$150,000 + FFS	26
Regina	Sessional Rate	$102-$117/hr	32
Edmonton	FFS	$180,000	24-28
Victoria	Salary	$168,000	30
Saint Johns (Nfld.)	Sessional/FFS/Practice Plan	$90/hr*	28

* Currently in negotiations

The Section of Emergency Medicine of New Brunswick recommended a standardized tariff of $125 per hour for every hour spent in the emergency room, including non-clinical work related activities, with premium for certified personnel. This was rejected by the Medical Society. It must be recognized that some physicians are already being paid above this tariff and any reduction will be met with threats of leaving. Failing to address the disparity within the province will also lead to unrest. Ontario illustrates the environment and the implicit problems facing government. Figure 4.

Figure 4

The Ontario Experience

Post Scott recommendations and before the emergency room alternative payment plan approach to paying for physician services, there was a bidding war between hospitals to get GP's to cover emergency rooms in Onatrio. Physicians would sell their services to the highest bidder not unlike the situation that led to the closure of L'Hôpital de Tracadie in June of this year. What happened then was both an escalation of fees (in areas within reach of economic migrants from the cities) and the risk of non-coverage.

The government stepped in with contracts that specified the dollar amounts and they were generous. They required immediate cooperation and they were prepared to pay for it to address other issues. The government stipulated that for the funds allocated, the hospital would not top up. For example, at Temiskaming Hospital several groups of physicians, totaling approximately 20 , with hospital privileges- 15 with emergency privileges would cover the emergency room 24/7 for $130/hr (approximately 25,000 visits per annum) At Temiskaming Hospital the current deal is a blend of FFS plus a share of $75,000 for covering obstetrics and FFS+ $75,000 shared by the group for covering inpatients)

A similar arrangement has occurred in Dryden, North Western Ontario. Six physicians left the community, the remainder were unable to sustain the emergency room and locums were unavailable.

Other communities have also been hit. Many doctors have closed their office and just do emergency medicine- no overhead and when there are enough physicians the lifestyle issue becomes more manageable. Other services such as inpatients, obstetrics and ICU have suffered as physicians refuse to cross cover unless compensated. New Brunswick is at the first phase of the process. Predictably, if Ontario is a bell-weather: havoc will reign in the office when emergency compensation is increased.

Expectations

Everyone is expecting more from a system which has finite resources. Is it appropriate for each resident of Region 6 to visit the emergency room twice a year? Both government and the public need to enter a dialogue about expectations and the ability to meet the needs of the public. Government needs to define what services it is prepared to underwrite, where they are to be provided and determine what it can afford to pay for the services. It is evident that the current level of service cannot be maintained with the current funding envelope.

The factors listed above have short term and long term qualifiers. The immediate challenge is to staff emergency rooms that the government has designated should provide 24/7 service. Referencing the business community experience, where competition for scarce resources is often the rule, only money will attract the personnel needed to staff emergency rooms in the short term. However, in a seller's market, the advantage lies with the seller. Government will be faced with the decision of whether or not to close a department rather than pay the demands of physicians. The reviewer has concerns that the level of pre-hospital care is not prepared to cope with the transfer of a large number of patients and thus will increase morbidity and mortality. Moreover, closing an emergency room has explicit problems:

- Physicians need to remain available for inpatient management.
- The resources of the receiving emergency room may not be able to cope with significant volume increases.
- Residents will continue to present for care with life threatening conditions at their local institution.

Long term, government needs to ask the public whether it is reasonable to have physicians as the sole provider of primary care services and whether it is reasonable to provide access to emergency care through community hospitals located 30 minutes apart 7/24.

Recommendations

Immediate (1 month)

I. The Department of Health and Wellness needs to re-examine its commitment to provide emergency services to the residents served by the hospitals surveyed.

II. An immediate short-term solution is required to stabilize physician manpower in the emergency rooms surveyed. To attract locums to under-serviced areas, a premium of 20% above tariff will be required in facilities that have less than eight physicians on the call-roster. In addition, costs associated with travel and accommodation need to be covered for locums travelling greater than 100 Kilometers.

III. Rural Primary Care is in difficulty from two perspectives: A) Increasing compensation for emergency room work will create competition for scarce resources and B) The training programs are not turning out the volumes needed to meet manpower demands. The DHW needs to move primary care reform forward urgently concentrating on alternative care models where care providers have more responsibility for front line management preferably in teams with physicians.

Long-term (6 months)

IV. The ratio of family physicians to FRCP or to CFPC(EM) working in New Brunswick emergency rooms needs to be defined factoring acuity level and specific DHW goals.

V. The DHW needs to define the value of non-clinical work in New Brunswick emergency rooms. Quality assurance, teaching, research, manpower planning and protocol development are all valued services required to assure that "best practices" form the corner stone of emergency medicine. This needs to be compensated outside the tariff structure. A committee representing emergency room physicians, the Department of Health and Wellness and consumers of health care should be struck to look at establishing the value of non-clinical work.

VI. A standardized provincial tariff for emergency medicine should be established within one month. To avoid an exodus to other jurisdictions, the minimum rate cannot be less than $2600 per day (24 hours of coverage) for rooms with 30,000 triaged visits. For rooms with volumes less than 30,000 visits, the tariff should be not less than $2200 per day. In some cases this will represent an increase of 64% (Tracadie-Sheila). Physicians in leadership positions or with extra training (FRCP) and CFPC(EM) should receive a 15% and 10% premium above base tariff, respectively. This will serve to encourage more family physicians to become certified through the practice eligibility route. It needs to be recognized that even with a standardized tariff, there will be some rooms that will remain difficult to staff and the premium referred to in recommendation II maybe be required to achieve desired staffing levels. Rooms with substantially higher volumes or with higher acuity require more manpower. Validated workload formulae are available to support staffing requirements.

VII. Large emergency rooms, with tertiary responsibilities, need to have practice plans based on sustainable business cases with the goal of providing timely, evidenced-based services in a cost efficient manner. Practice plans should provide for sustainable manpower levels with attention to career development/advancement in the context of recruitment and retention of sufficient personnel whose skill-mix addresses the needs of the institution and or health region.

VIII. A provincial emergency services committee should be established with representation from Department of Health and Wellness, tertiary, regional and community facilities with the mandate to standardize all activities associated with the delivery of emergency services. This mandate should include manpower planning, tariff rates, standardized triage, protocol development, regional disparity, the development of the electronic patient record, Tele-emergency, trauma management and pre-hospital care. This provincial body could be empowered to contract with physicians and other provider groups to cover emergency rooms.

IX. Immediate attention needs to be given to ameliorating the charged atmosphere in the Tracadie-Sheila area. Comments about the physicians' work ethic and moral obligations, attributed to community leaders, health administrators and government representatives, have compromised the chances of establishing a cooperative working relationship with the physicians currently providing services to L'Hôpital de Tracadie.

X. The long-term solution to providing comprehensive primary care requires that alternative service delivery models be incorporated into the health care paradigm. Legislation needs to be enacted to provide for easier deployment of these resources to rural communities.

XI. A public information program is required to address the issue of inappropriate utilization of emergency rooms.

XII. DHW needs to undertake a cost-benefit analysis of Telecare using an independent assessor and using a methodology that guarantees broad stakeholder participation. Given the level of distrust at the grassroots, it is important the provider is at arm's length.

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